



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,069	09/15/2006	Karl-Heinz Schumacher	295113US0PCT	6478

22850 7590 07/30/2009
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

SASTRI, SATYA B

ART UNIT	PAPER NUMBER
----------	--------------

1796

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

07/30/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/593,069	Applicant(s) SCHUMACHER ET AL.	
	Examiner SATYA B. SASTRI	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11 and 13-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11 and 13-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/14/09</u> . | 6) <input checked="" type="checkbox"/> Other: <u>JP09176605, English translation and JP 10-316774, Machine translation.</u> |

DETAILED ACTION

1. This office action is in response to amendment filed on 4/14/09. Claims 11, 13-21 are now pending in the application.

Previously Cited Statutes

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 11, 13-16 are rejected under 35 U.S.C. 102(b) as anticipated by Samour et al. (US 3,400,103).

The prior art to Samour is in regard to latently crosslinkable pressure-sensitive adhesive polymers. The prior art discloses that the pressure-sensitive adhesive polymers are obtained by polymerization of crosslinkable monomers having polyethylenic unsaturation wherein the mixture necessarily includes a monomer having hydrogen grouping. A soluble pressure sensitive adhesive polymer may be prepared by emulsion or solution polymerization with peroxide-type radical initiators (col. 2, lines 39-55) and is applied as a solution on a backing in the manufacture of a pressure-sensitive adhesive tape (col. 1, lines 39-64).

The polymers may be prepared from monomers and mixtures of alkyl (meth)acrylates, mixtures of alkyl acrylates and one or more polar compounds such as acrylic acid, methacrylic acid, itaconic acid, (meth)acrylamide etc. and other disclosed mixtures (col. 2-3, bridging paragraph). Specific examples of crosslinking monomers disclosed in this reference include

Art Unit: 1796

ethylene glycol dimethacrylate as a species in a small genus having 6 compounds (col. 4, lines 24-30).

Working examples 4 and 8 disclose copolymers comprising [sic]2-EAH (2-ethylhexyl acrylate), Aa (acrylamide) or AA (acrylic acid) and EGDMA (ethylene glycol dimethacrylate) with monomeric amounts within the presently claimed range (of claim 11). The copolymers are prepared by free-radical emulsion copolymerization with cumene hydroperoxide as the initiator (col. 6, lines 35-75, TABLE II, col. 7, lines 30-44). It is noted that carboxamide groups presently recited in claim 11 as hydrophilic groups read on amide groups of acrylamide structural unit and alkanediol di(meth)acrylates reads on EGDMA.

In light of above, presently cited claims are anticipated by the prior art.

With regard to claim 14, examiner interprets the claim limitation “emulsion polymer” as referring to a polymer obtained by emulsion polymerization. As such, the copolymers of working examples 4 and 8 discussed above are prepared by emulsion polymerization and thus meet the claim limitation.

4. Claims 11, 13-17, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09176605A, English translation).

Prior art to Ishikawa et al. discloses water-based pressure sensitive adhesive compositions. The adhesive compositions contain a water-based dispersion of a copolymer prepared by emulsion polymerization of a monomer mixture consisting of 0.1 to 10 wt.% of polyfunctional unsaturated monomers, 0.1 to 15 wt.% of α , β -unsaturated acids, 0.5 to 20 wt.% of vinyl acetate and 55 to 99.39 wt.% of other unsaturated monomer (first invention, 0004).

Art Unit: 1796

Disclosed polyfunctional unsaturated monomers include ethylene glycol di(meth)acrylates, propylene glycol di(meth)acrylate, 1, 4-butylene glycol di(meth)acrylate, 1, 6-hexane glycol di(meth)acrylate. The preferred range of the disclosed polyfunctional unsaturated monomers is 0.05 to 5 wt.% and more preferably, 0.1 to 2 wt.% (0006). The presently recited alkanediol di(meth)acrylate monomer of claim 11 reads on the disclosed species, i.e. ethylene glycol di(meth)acrylates, propylene glycol di(meth)acrylate, 1, 4-butylene glycol di(meth)acrylate and 1, 6-hexane glycol di(meth)acrylate.

As for the other unsaturated monomers, alkyl(meth)acrylates with 1-10 carbon atoms are preferred and should be in the range of 55-99.39%, preferably 60-90 wt.% (0012).

Working examples in the Table 1 disclose copolymers comprising alkyl(meth)acrylates within the presently claimed range (of claim 11), include hydrophilic acid comonomers as presently claimed obtained by emulsion polymerization with ammonium persulphate as free radical initiator (0018, page 20).

The prior art fails to disclose compositions comprising copolymers obtained from more than 1% of alkanediol di(meth)acrylate in the monomer mixture.

Given the broad teaching that copolymers are obtained from 0.01 to 10 wt.%, preferably 0.05 to 5 wt.% of polyfunctional unsaturated monomers, it would have been obvious to one of ordinary skill in the art to include more than 1% by wt. of any of the disclosed polyfunctional unsaturated monomers, including ethylene glycol di(meth)acrylates, propylene glycol di(meth)acrylate, 1, 4-butylene glycol di(meth)acrylate and 1, 6-hexane glycol di(meth)acrylate and thereby arrive at the presently claimed invention.

Art Unit: 1796

With regard to claims 14 and 15, the disclosed process in the working examples is emulsion polymerization and the compositions do not include additional crosslinkers.

With regard to claims 17, 19 and 20, Ishikawa disclose the use of pressure sensitive adhesives for use in adhesive tapes, labels, sheets etc., as well as for bonding of foam base materials and film base materials. Furthermore, disclosed foam base and film base materials include polyvinylchloride (0001, 0016).

With regard to claims 13 and 21, the disclosed polyfunctional unsaturated monomers include ethylene glycol di(meth)acrylate, propylene glycol di(meth)acrylate, 1, 4-butylene glycol di(meth)acrylate and 1, 6-hexane glycol di(meth)acrylate and are preferably used in an amount ranging from 0.05 to 5 wt.% (0006).

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09176605A, English translation) in view of Kimihiro (JP 10-316774, Machine translation).

The discussion with regard to Ishikawa et al. set forth above in paragraph 4 is incorporated herein by reference.

Ishikawa et al. is silent with regard to a method of using the adhesive on plasticized PVC film.

Plasticized PVC is routinely used as the backing material in the adhesive industry. For instance, Kimihiro discloses self-adhesive sheets comprising plasticized polyvinyl chloride sheets. The plasticized polyvinyl sheet material is prepared by compounding vinyl chloride resin with a plasticizer in the presence of fatty acid amide and acrylic oligomer that serve as lubricants. Such plasticized PVC sheets have good processability and a good hand tearability for

Art Unit: 1796

use in medical self-adhesive tapes, electrical insulation tapes, binding tapes etc. (abstract) and therefore, it would have been obvious to one of ordinary skill in the art to utilize such plasticized PVC sheets with adhesive compositions of Ishikawa et al. and thereby arrive at the presently cited claim.

Response to Arguments

6. Applicant's arguments have been fully considered but are moot in view of new grounds of rejection necessitated by the amendment filed on 4/14/09. In particular, limitation from previously presented claim 12 (now cancelled) and limitations from the specification that were not present in the original claims have now been recited in currently amended claim 11. Thus, the following action is properly made final.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

Art Unit: 1796

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 272 1112. The examiner can be reached on Mondays, Thursdays and Fridays, 7AM-5.30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. David Wu can be reached on 571-272-1114.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Satya B Sastri/

Examiner, Art Unit 1796